# **BookletChart**

# Lake Huron

(NOAA Chart 14860)

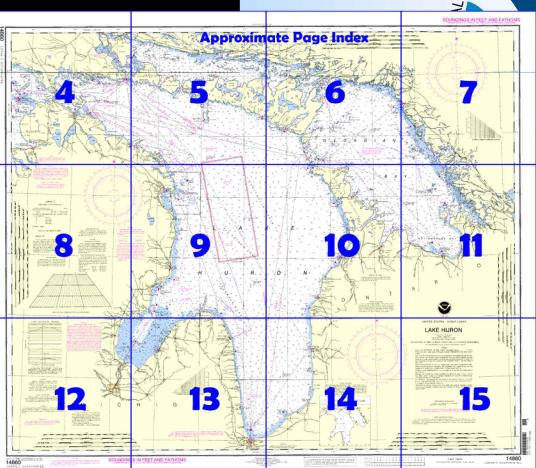


A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

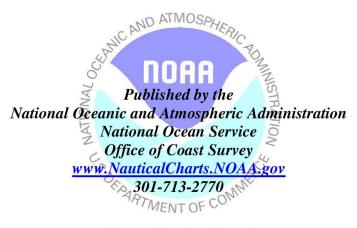
- ☑ Complete, reduced scale nautical chart
- ✓ Print at home for free
- ☑ Convenient size
- ☑ Up to date with all Notices to Mariners

NOAA

- ☑ United States Coast Pilot excerpts
- Compiled by NOAA, the nation's chartmaker.



Home Edition (not for sale)



# **What are Nautical Charts?**

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

# What is a BookletChart<sup>™</sup>?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <a href="http://www.NauticalCharts.NOAA.gov">http://www.NauticalCharts.NOAA.gov</a>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

# **Notice to Mariners Correction Status**

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



# [Coast Pilot 6, Chapter 10 excerpts]

(9) Lake Huron is the second largest of the Great Lakes. Three large bays extend from the main body of the lake, Saginaw Bay on the W side and North Channel and Georgian Bay on the NE side. The lake receives the waters of Lake Michigan through the Straits of Mackinac and those of Lake Superior from the St. Marys River. The lake discharges at its S end into St. Clair River at Fort Gratiot. The lake is a connecting link in the Great Lakes chain. The depth of water in St. Marys River,

St. Clair River, and Detroit River governs the draft of vessels navigating Lake Huron to and from Lakes Superior and Erie.

(10) The Canadian Coast Guard operates a Vessel Traffic Service in Canadian waters from Long Point in Lake Erie through the Detroit and St. Clair Rivers to De Tour Reef Light in Lake Huron. (See chapter 3 and

the Annual Edition of Canadian Notices to Mariners for complete information.)

(15) Dense fog plagues the mariner most often in spring and early summer over the open lake waters. From April into July visibilities drop below 0.5 mile up to 11 percent of the time. May and June are the worst times, and the cold, central waters are the most likely place. These fogs are usually the result of warm air moving across the lake that is still cold from the previous winter season. They often come on winds with a southerly component; but NW, NE, and E winds also bring them. Fog is most prevalent and thickest during the morning hours. Rain, blowing snow and low clouds also reduce visibilities, particularly from late fall through early spring.

(16) Thunderstorms are most frequent from April through October, with peak activity during June, July, and August. Over the open water during this peak season thunderstorms are encountered 2 percent of the time. They are most likely between midnight and sunrise. Onshore thunderstorms can be expected on 4 to 7 days per month in the summer months. They are most likely during the late afternoon.

(17) The central part of Lake Huron is mainly an open water area, but drifting patches of thin ice may be present from early February until mid-March. These patches drift S toward the St. Clair River. An ice bridge forms across the head of the river. Ice accumulates to a depth of 12 to 18 inches above the ice bridge; the bridge itself achieves a much greater thickness. The ice bridge is occasionally broken by high winds. (18) In North Channel, fast ice forms in mid-January and reaches a thickness of 25 to 30 inches by mid-March, then decays rapidly and clears by mid-April. In Georgian Bay, ice begins to form near the end of December, and fast ice is well established by early January. The cover spreads over the entire bay by the end of January, but although concentrations are high, the ice is moved around by the wind to form leads and dispersed ice areas. This ice usually reaches the thick category during the first half of March. Decay begins in mid-March; the ice melts within the bay, and the area is clear by mid-April. Rotting fast ice may be present in some areas until the end of April.

(19) The Straits of Mackinac is subject to severe problem ice conditions. The area is very susceptible to wind action, and the ice cover is unpredictable. Ice forms early in the season in the Straits and attains an average thickness of 17 inches and an average maximum thickness of 25 inches. The solid ice thickness remains about the same throughout the season. The prevailing W winds cause considerable ridging and 4–to 6–foot windrows are common. Some ice ridges as much as 30 feet deep have been reported.

(20) Ice normally begins to form in harbors and shallow-water areas in early December with ice fields and concentrated brash forming in early January. The first ice barrier across the Straits usually forms between Waugoshance Point and St. Helena Island.

(21) As ice forms in South Channel and between St. Ignace and Mackinac Island, these waters are closed to navigation to allow the formation of ice bridges. Mariners are notified of the closure by Broadcast Notice to Mariners.

(22) Prevailing W winds cause ice conditions at the Lake Michigan end of the Straits of Mackinac to be more difficult than at the Lake Huron end. From the Mackinac Bridge to Lansing Shoals, the Straits are normally frozen over with solid plate ice by mid-January. Heavy accumulations and ridging occur in the vicinity of St. Helena Island, White Shoal, and the reefs along the Upper Peninsula of Michigan. To avoid danger to vessels, Grays Reef Passage may be closed to navigation; mariners will be informed of any closure by Broadcast Notice to Mariners.

(23) As deterioration begins in March or April, stable fast ice becomes drift ice moving with winds and currents. Tracks cut by icebreakers become unreliable as the ice field deteriorates and shifts. Thick shore ice may drift into otherwise open channels and endanger even ice-reinforced vessels. A vessel which becomes beset in drift ice is vulnerable to grounding because of the many shoals, reefs and shallow-water areas

in the Straits of Mackinac.

# Corrected through NM Jun. 25/05 Corrected through LNM Jun. 14/05

# CABLE AND PIPELINE AREAS

The cable and pipeline areas falling within the areas of the larger scale charts are shown thereon and are not repeated on this chart.

# CAUTION

# POTABLE WATER INTAKE

POLIABLE MALE HINLAND
Vessels operating in fresh water lakes or rivers
shall not discharge sewage, or bellast, or brige
water within such areas adjacent to domestic
water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93).
Consult U.S. Coast Pilot 6 for important supplemental information. mental information.

### NOAA WEATHER BADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at

| Alpena,MI           | KIG-83 | 162.55 MHz |
|---------------------|--------|------------|
| Clio,MI             | KIH-29 | 162.40 MHz |
| Sault Ste Marie, MI | KIG-74 | 162.55 MHz |
| Gaylord,MI          | WWF-70 | 162.50 MHz |
|                     |        |            |

SUBMARINE PIPELINES AND CABLES Charted submarine pipelines and submarine cables and submarine pipeline and cable areas

| \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |  |
|--|--|
| Cable Area                             |  |
|  |  |

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

# RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

# CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

# RACING BUOYS

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.

# CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with cartifornia. should be used with caution. Station positions are shown thus:

(Accurate location) o(Approximate location)

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners. During some winter months or when endan-gered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

# SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 6 for important supplemental information.



# NOTE B

Mariners are cautioned against anchoring, dredging, or trawling in the area due to the possible existence of unexploded ordnance.

# MANUAL FOG SIGNAL

Fog signal is activated by keying radio mike, channel 19 VHF (156.950 MHz), 5 times within 5 seconds. Horn will stay active for 30 minutes.

# **Table of Selected Chart Notes**

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Comthe Office of the District Engineer, Corps of Engineers in

roit, Michigan. Refer to charted regulation section numbers.

### WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

### POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone com-munication is impossible (33 CFR 153).

# NO-DISCHARGE ZONE, 40 CFR 140

NO-DISCHARGE ZONE, 40 CFR 140
Michigan waters of Lakes Michigan, Huron, Superior, Erie and St. Clair, all waterways connected thereto, and all inland lakes are designated as a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely, prohibited from discharging any sewage, treated or (ao, untreated, into the waters. Commercial vessel sewage shall include graywater. All vessels with an installed marrine sanitation device (MSD) that are navigating, moored, and anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: http://www.epa.gov/wow/oceans/vessel\_sewage/vsdnozone.html.

# HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

Additional information can be obtained at nauticalcharts.noaa.gov.

## CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with certificial conditions.

# SOURCE DIAGRAM

Most of the hydrography identified by the letter IT was surveyed by the U.S. Army Corps of Engineers prior to 1974. Other outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charing. Surveys have been banded in this diagram by date and type of survey. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.



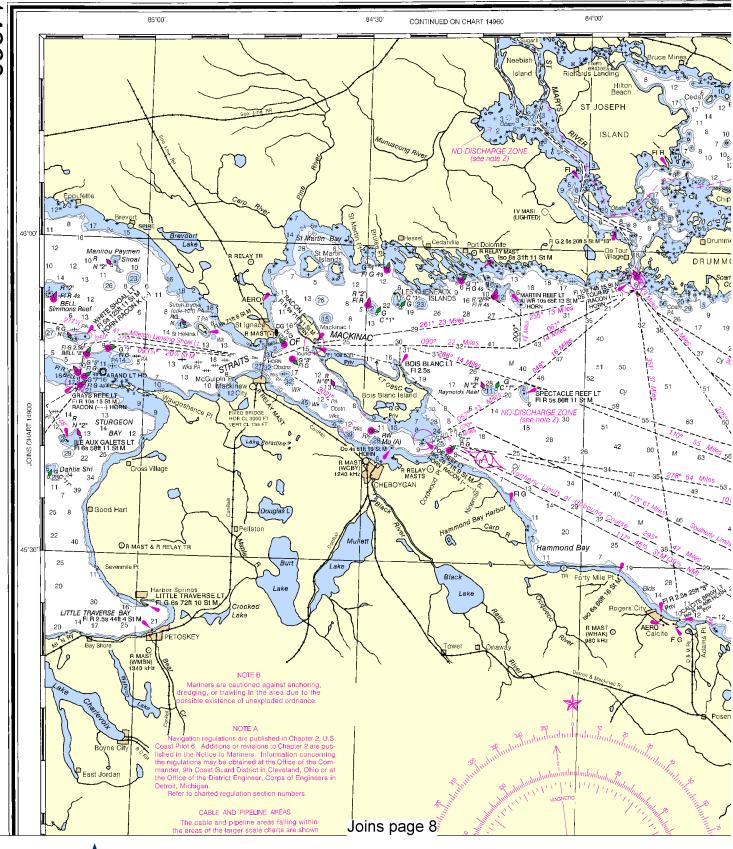
Vessel Traffic Service calling-in point; arrow indicates direction of vessel movement. Mandatory calling-in points are identified numerically. Voluntary calling-in points are identified alphabetically. For additional information see U.S. Coast Guard Pilot 6 and the U.S. and Canadian Notice to Mariners.

# Loran-C correction tables published by the National Geospatial-Intelligence Agency or cithers should not be used with this chart. The litera of position shown have been adjusted based on theoretically determined overland signal propagation delays. They have not been verified by comparison with survey data. Every effort has been made to meet the Vanautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are caulioned not to rely solely on the lattices in inshore waters.

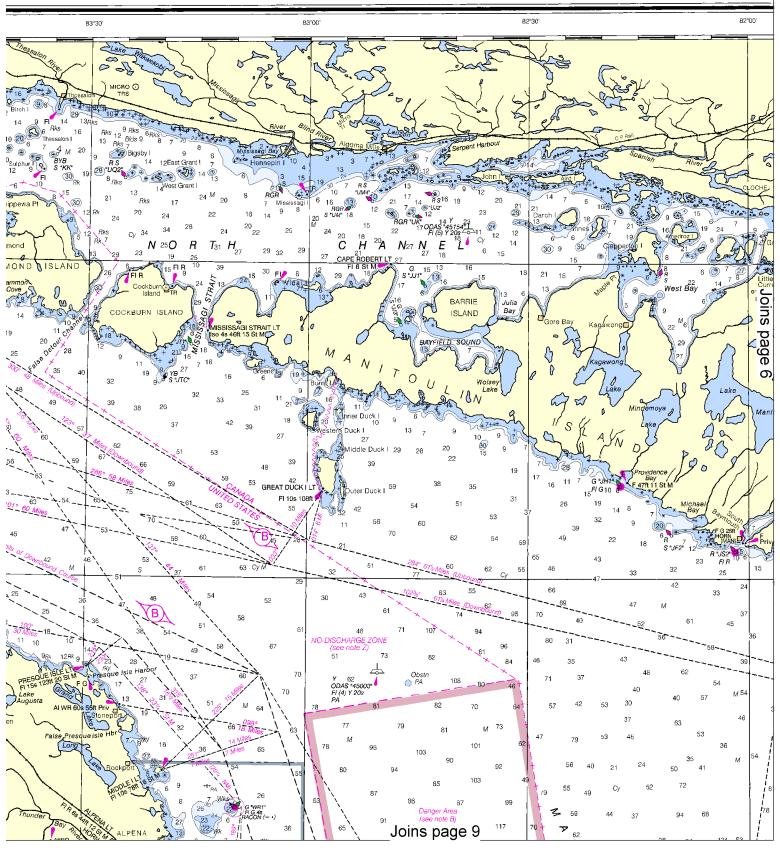
RATES ON THIS CHART

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Microseconds Microseconds individual station







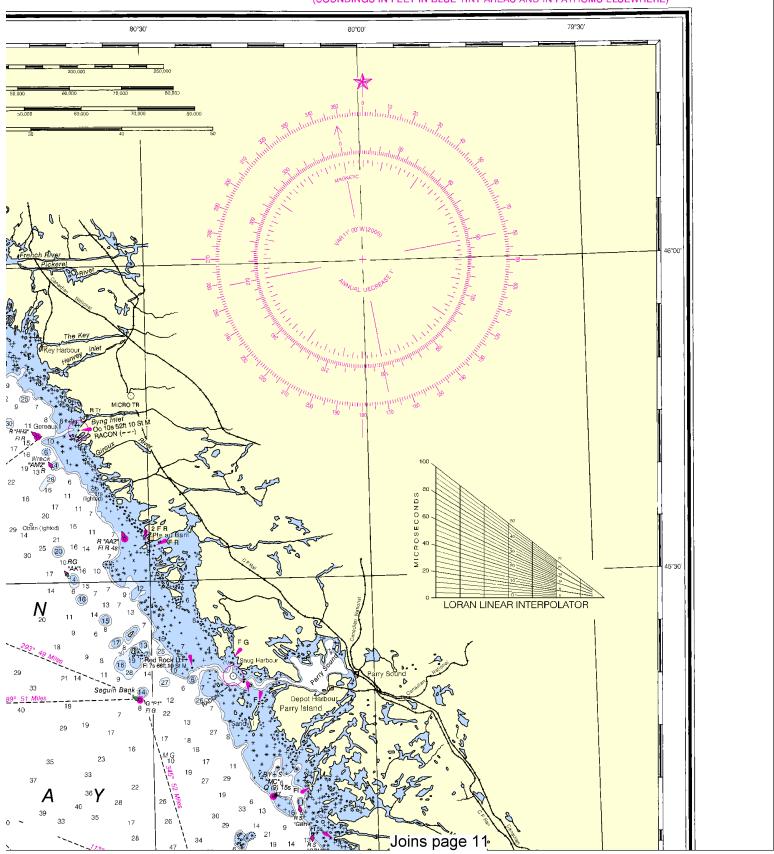
This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:666667. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

Formerly LS-5 1st Ed., 1860 KAPP 1312 30 9 18 21 B page Joins 117 (24: Ak g 11 gc 'JC1" 15 13 13 Northeast Shingle FI 10s 19 St M Y ODAS "45137" <sup>17</sup> FI (5) Y 20s PA 17 59 65 43 55 31 <sup>49</sup>**G** 66 G **A** 20 70 For more detail in Canadian waters, consult the chart catalog of the Canadian Hydrographic Service 32 45 58 63 60 CABOT HEAD LT F R 726 66 63 29 DYER BAY 50 75 В 48 Joins page 10

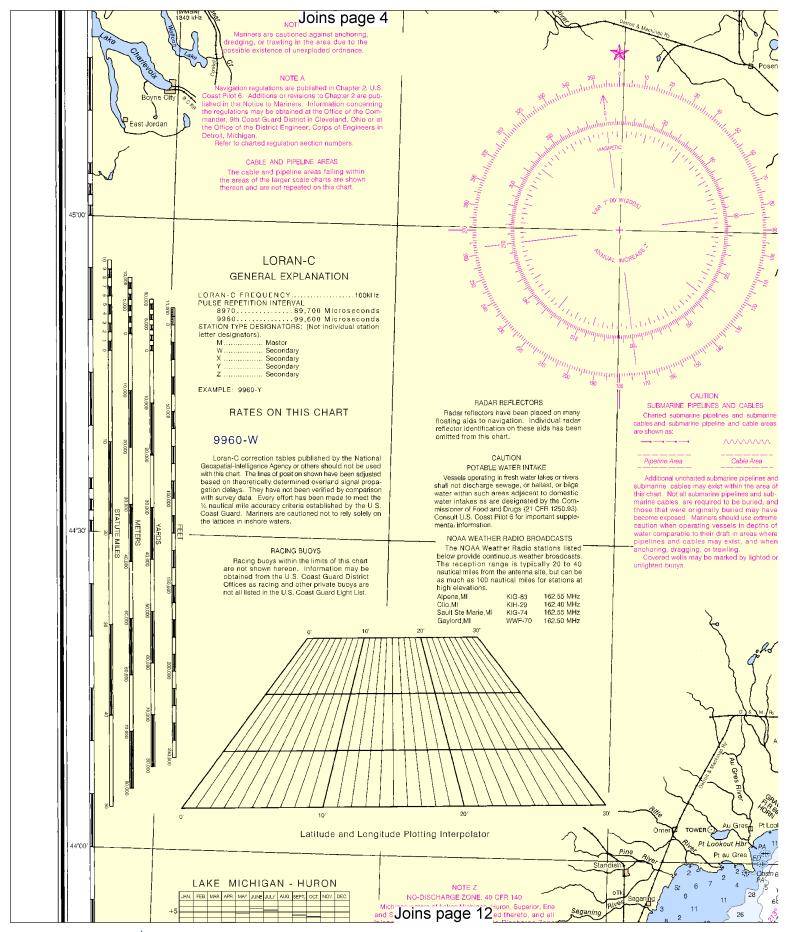




# SOUNDINGS IN FEET AND FATHOMS (SOUNDINGS IN FEET IN BLUE TINT AREAS AND IN FATHOMS ELSEWHERE)

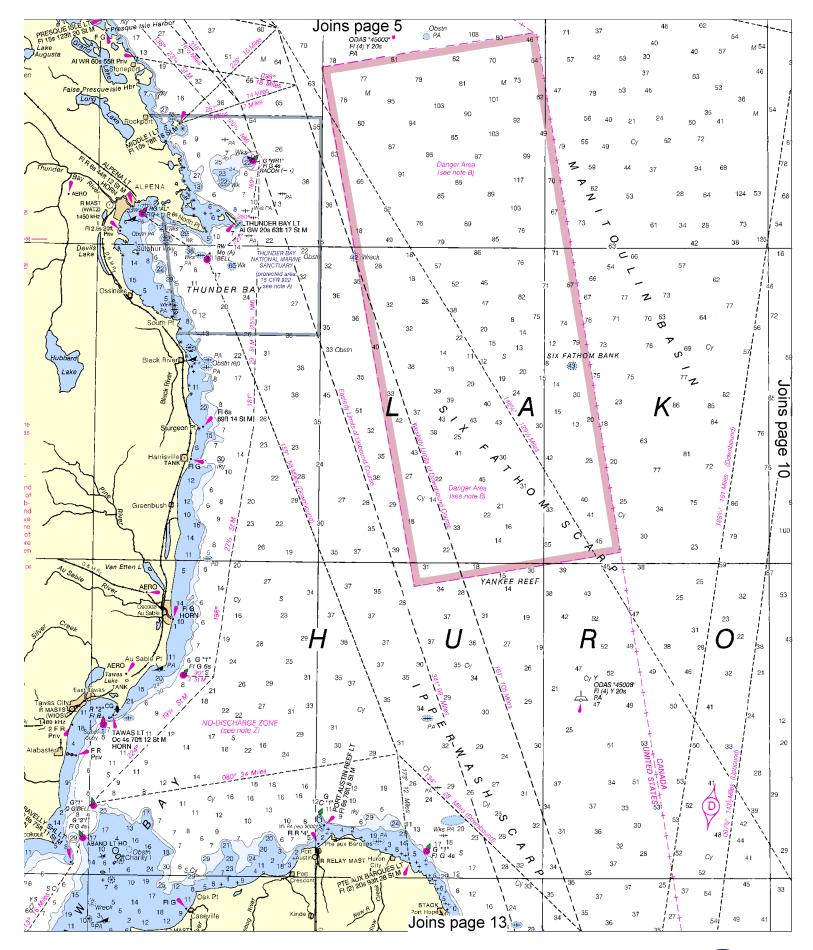


This BookletChart has been updated with: Coast Guard Local Notice To Mariners: 0710 2/16/2010, NGA Weekly Notice to Mariners: 0910 2/27/2010, Canadian Coast Guard Notice to Mariners: 0110 1/29/2010.

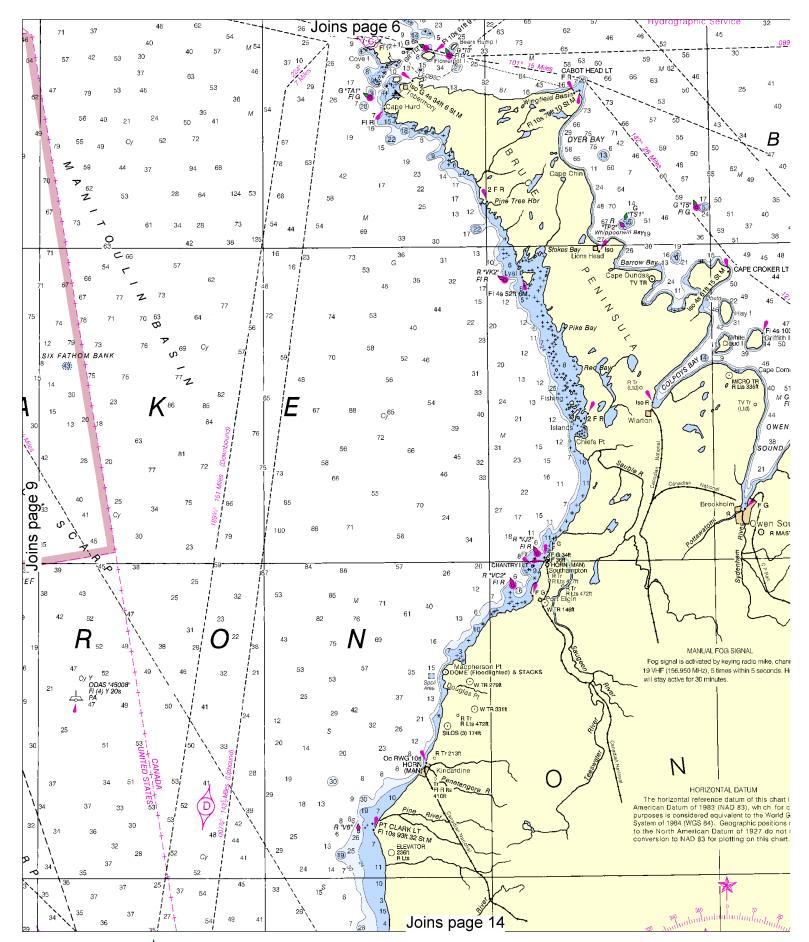






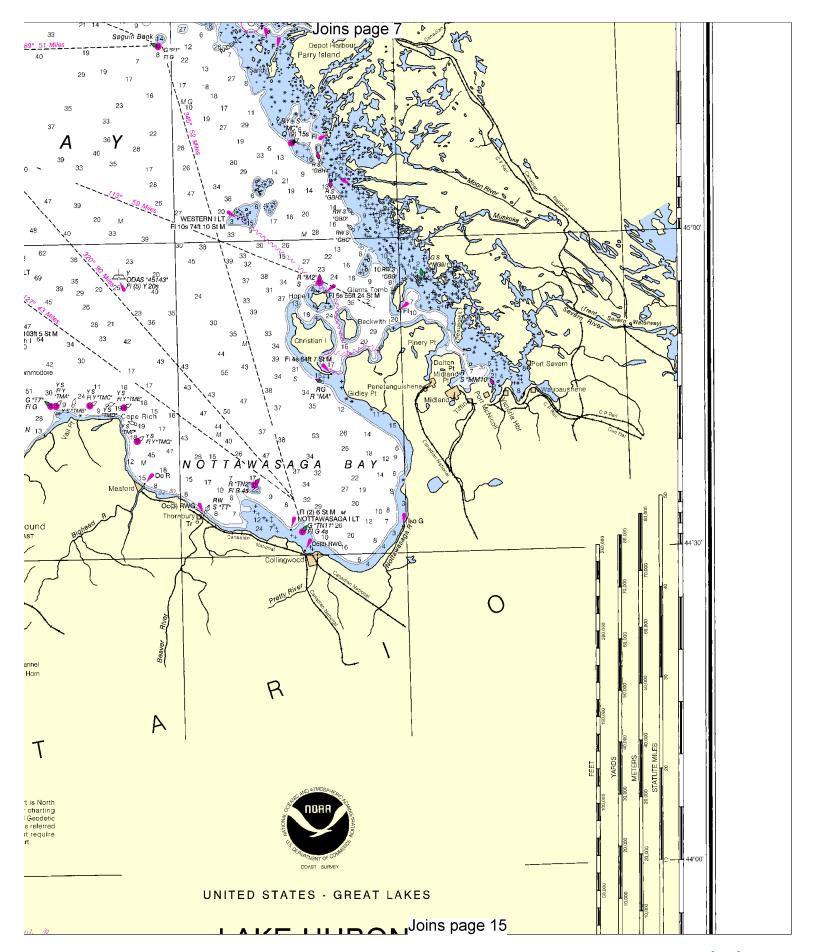


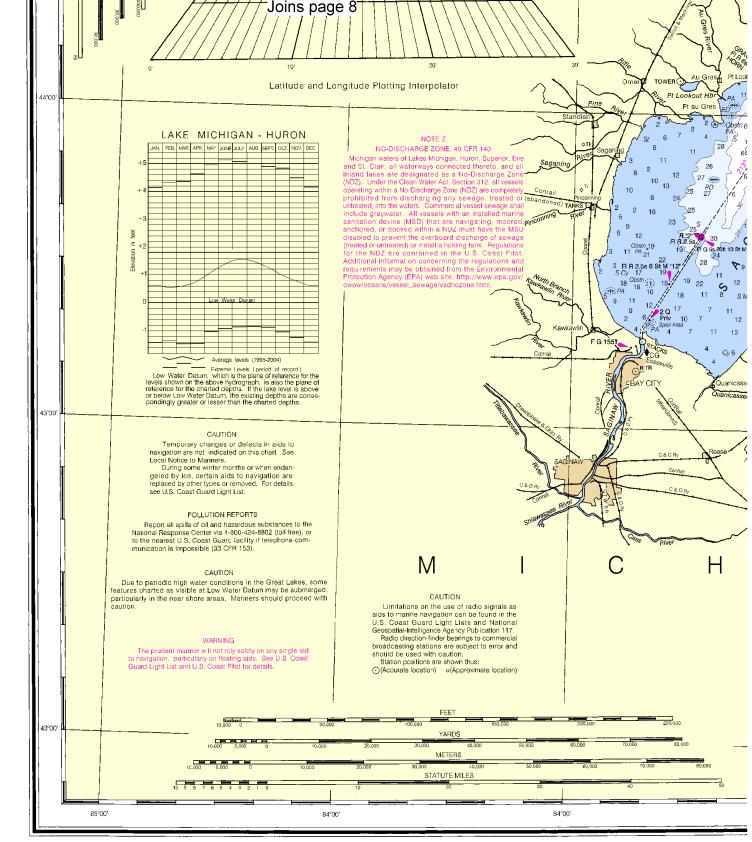












36th Ed., Jun./05 ■ Corrected through NM Jun. 25/05 Corrected through LNM Jun. 14/05

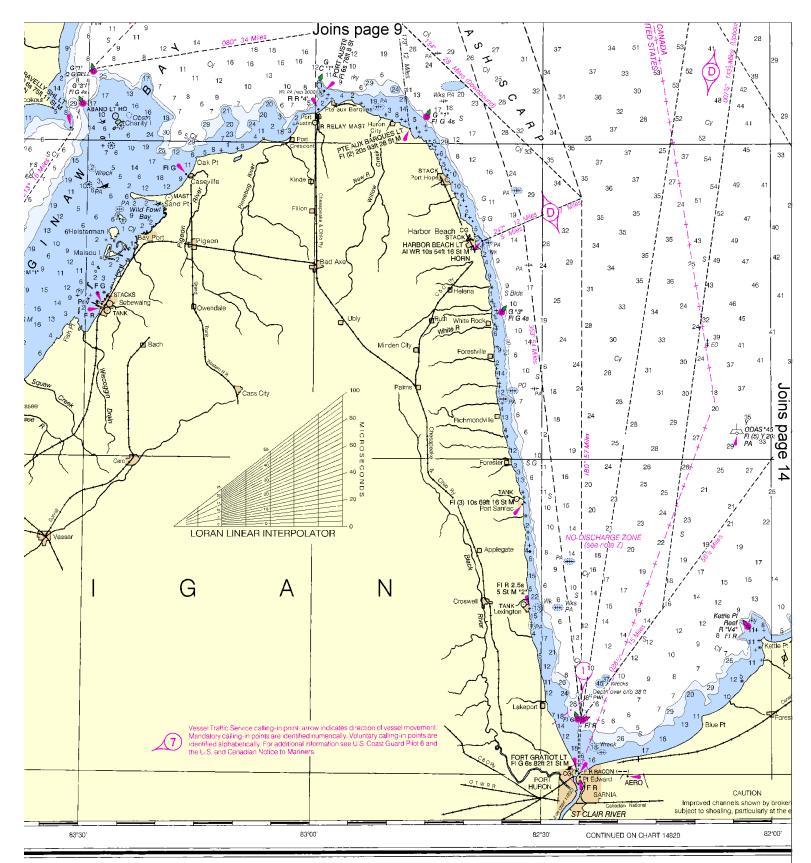
LORAN-C OVERPRINTED

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

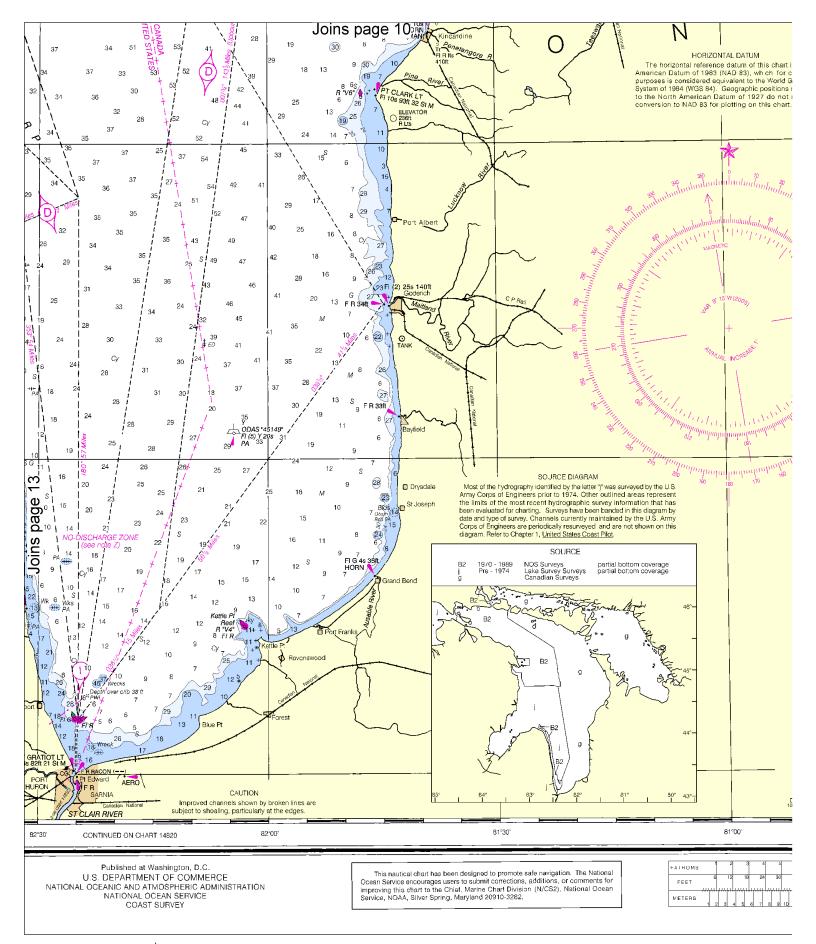
SOUNDINGS IN F





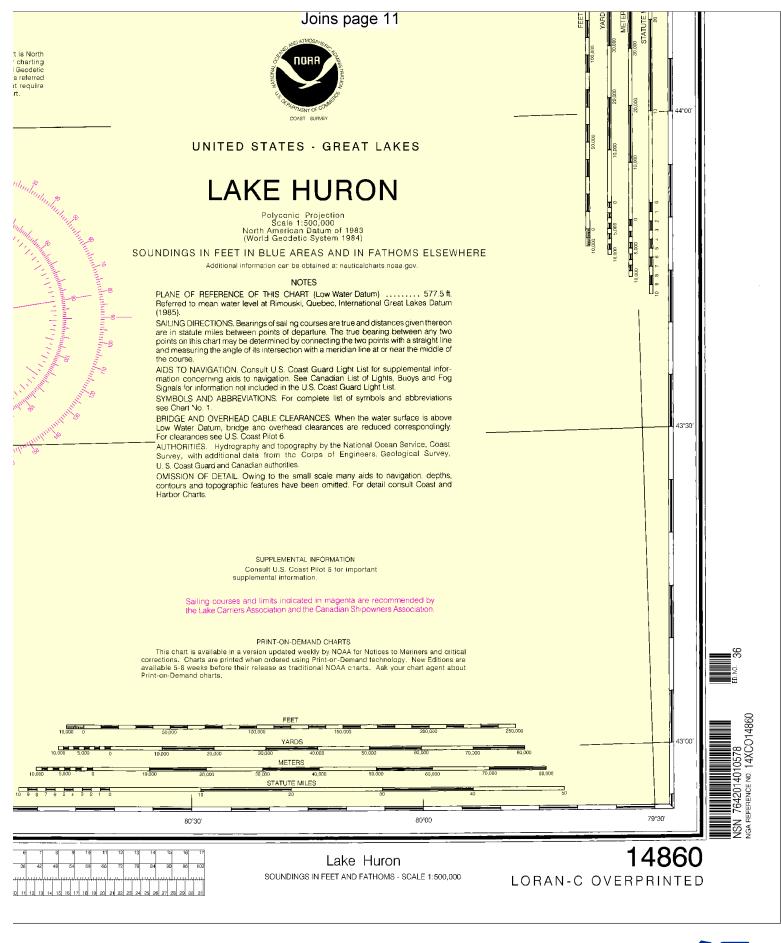
FEET AND FATHOMS
NT AREAS AND IN FATHOMS ELSEWHERE)

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY









# **EMERGENCY INFORMATION**

# VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

**Channel 9** – Communications between boats and ship-to-coast.

**Channel 13** – Navigation purposes at bridges, locks, and harbors.

# Channel 16 – Emergency, distress and safety calls

to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

**Channel 22A** – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 & 78A – Recreational boat channels.

# **Distress Call Procedures**

- 1. Make sure radio is on.
- 2. Select Channel 16.
- 3. Press/Hold the transmit button.
- 4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- 6. Release transmit button.
- Wait for 10 seconds If no response Repeat MAYDAY Call.

# HAVE ALL PERSONS PUT ON LIFE JACKETS!!

**Mobile Phones** – Call 911 for water rescue.

**Coast Guard Search & Rescue (RCC)** – 216-902-6117

**Coast Guard S & R (Sault Ste Marie)** – 906-635-3236 **Coast Guard Search & Rescue (Detroit)** – 313-568-9524 or 313-568-9560

**Canadian Coast Guard (RCC Trenton)** – 1-800-267-7270 or 613-965-3870

<u>NOAA Weather Radio</u> – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



# NOAA CHARTING PUBLICATIONS

Official NOAA Nautical Charts – NOAA surveys and charts the national and territorial waters of the U.S, including the Great Lakes. We produce over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: <a href="https://www.NauticalCharts.NOAA.gov">www.NauticalCharts.NOAA.gov</a>.

Official Print-on-Demand Nautical Charts – These full-scale NOAA charts are updated weekly by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print-on-Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at <a href="https://www.oceanGrafix.com">www.oceanGrafix.com</a>.

# Official Electronic Navigational Charts (NOAA ENCs®) –

ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

# Official Raster Navigational Charts (NOAA RNCs<sup>™</sup>) –

RNCs are geo-referenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at <a href="https://www.NauticalCharts.NOAA.gov">www.NauticalCharts.NOAA.gov</a>.

Official BookletCharts<sup>™</sup> – BookletCharts<sup>™</sup> are reduced scale NOAA charts organized in page-sized pieces. The "Home Edition" can be downloaded from NOAA for free and printed. The Internet address is www.NauticalCharts.gov/bookletcharts.

Official PocketCharts<sup>TM</sup> – PocketCharts<sup>TM</sup> are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

Official U.S. Coast Pilot® – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from NOAA chart agents or may be downloaded for free at <a href="https://www.NauticalCharts.NOAA.gov">www.NauticalCharts.NOAA.gov</a>.

Official On-Line Chart Viewer – All NOAA nautical charts are viewable here on-line using any Internet browser. Each chart is up-to-date with the most recent Notices to Mariners. Use these on-line charts as a ready reference or planning tool. The Internet address is www.NauticalCharts.gov/viewer.

Official Nautical Chart Catalogs – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to <a href="http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm">http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm</a>.

Internet Sites: <a href="https://www.Noa.gov">www.Noa.gov</a>, <a href="